



SOCIETY OF ACTUARIES

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**ANNUAL STATEMENT  
HEALTH INSURANCE INDICES**

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The only indices set out in the Annual Statement are (1) the ratio of net investment income to mean assets in Exhibit 2, and (2) those ratios in Schedule H and the Accident and Health Policy Experience Exhibit (the Exhibit). The impropriety of the Schedule H and Exhibit ratios as meaningful indicators is discussed below.

It is assumed in the discussion that statutory accounting principles and considerations are operative, and the superiority of indices based on generally accepted accounting or economic value principles is not advanced. The statutory indices adjusted and unadjusted are used and referred to by regulators, industry groups, trade journals, and others. Thus, within the context of statutory accounting, the indices should be properly determined.

**Expense Ratios**

The condition that the ratios purport to measure is the adequacy and reasonableness of premiums in relationship to the value of insurance provided. One element in that measurement is the determination of the relationship of expenses (commissions and other expenses) to premiums.

In the Analysis of Operations by Lines of Business (the Analysis) in the Annual Statement, the increase in the gross unearned premium reserves may be taken either as a deduction from incurred premiums (collected premiums plus increase in due and uncollected premiums minus increase in advance premiums) or as an addition to increase in reserves. Since few life companies (except for Ohio policies) provide a refund of unearned premium to a policyowner who terminates his policy during a period for which premium has been paid, most life companies treat the increase in unearned premium reserves as an addition to increase in reserves. Commissions and other expenses must be reported in the Analysis on an accrual (incurred) basis, which is consistent with the way premiums are reported since the accrued commissions and other expenses imputable to the unearned premiums are included in such reported expenses.

The earned premiums reported in Schedule H are defined as incurred pre-

miums minus the increase in active life reserves including unearned premium reserves. The accrued commissions and other expenses have the same definitions given in the Analysis and are divided by the earned premiums to give the Schedule H expense ratios. It should be evident that these ratios fail as meaningful indicators in that they overstate the expense ratios. This overstatement results because the denominator—that is, the earned premium—used in determining the ratio is inconsistent with the accrued concept embodied in the numerator. For a growing insurer the inflated levels of these Schedule H expense ratios are greatest for the “collectively renewable,” “non-cancellable,” “guaranteed renewable,” and “non-renewable for stated reasons only” individual policies because of the effect of the increase in active life reserves deduction in the denominator. Even where active life reserves are not a factor, the increase in unearned premium reserve deduction can cause distortions.

The data in the table below illustrate the inflated levels of the Schedule H expense ratios. This table and that presented later are based on Schedule H data of the 1971 annual statement of the writer's company for “non-cancellable” and “guaranteed renewable” individual policies.

**Claim Ratios**

Level premium funding of an insurance risk which increases with increase in age serves two purposes which are important to and within the context of this discussion. One purpose is to fund in the early policy years the value of benefits incurred when the premiums accrue; the other is to fund the present value of the excess of the value of future benefits over future “premiums.” Were the insurance risk constant during the period of insurance, or were the insurance limited to one year, the premium would need only suffice to fund the benefits incurred in that period. In these

situations a simple comparison of incurred claims to incurred premiums, in conjunction with an expense measure, would give an indication of the adequacy of those premiums.

Because of the purposes served by level premium funding, the adequacy or reasonableness of such premium in relationship to both the current and future excess value of insurance provided should be indicated by comparing the sum of incurred claims and the increase in the active life reserves to the incurred premiums for that period. Again, expense levels must be considered.

How do these measurements which are inherent in the Analysis compare to those in Schedule H and the Exhibit? In the Exhibit the term incurred losses is used in place of but is given the same definition as the Schedule H term incurred claims. The only index set out in the Exhibit is the “ratio of incurred losses to premiums earned.” In Schedule H the claim ratios are determined by one of two expressions. For group policies and “other accident only” and “all other” individual policies, the ratio is obtained by dividing incurred claims (settled claims plus increase in unaccrued claim reserves and in accrued claim liabilities) by earned premiums. For “collectively renewable,” “non-cancellable,” “guaranteed renewable” and “non-renewable for stated reasons only” individual policies the sum of (1) incurred claims, (2) the increase in advance premiums and (3) the increase in active life reserves is divided by written premiums (incurred premiums plus increase in advance premium), giving the so-called supplemental loss ratio.

Most health insurance premiums are not guaranteed, so it is impractical to offer discounts on premiums paid in advance. This practice represses the amount of advance premiums and results in a small increase in advance premiums. Since this increase is small and included in both the numerator and denominator

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**Expense Indices**

Expense Category	Schedule H (Earned Premium Basis)	Analysis (Incurred Premium Basis)	Ratio
Commission	24.91%	22.24%	1.12
General insurance expense	15.80	14.10	1.12
Taxes, Licenses, fees	1.85	1.66	1.11
Total expenses	42.56	37.99	1.12

## Joint Sponsorship

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File this form of Joint Sponsorship had much to recommend it, the Joint Committee recommended — and all six actuarial organizations accepted the recommendation — a broader concept of Joint Sponsorship. Commencing this spring, all examinations will be Jointly Sponsored by all six organizations, although some exams are not used for membership in some of the organizations.

The advantages of this overall Joint Sponsorship are:

(1) The fact that there would be “all the names on one piece of paper” recognizes a fundamental unity in the profession. Such unity would encourage a profession with similar standards and one more likely to meet the needs of all actuaries.

(2) It would support and add credibility to the efforts of the American Academy and the Canadian Institute to achieve national accreditation of actuaries.

(3) It should facilitate a valuable interchange of ideas in curricula. It might encourage the development of a syllabus that tested principles rather than practices. It might also reduce confusion by encouraging a common or similar terminology among actuaries.

One argument against this form of Joint Sponsorship was that it would be misleading, because the applications for examination and the examination result lists will show the list of all sponsoring organizations on the masthead. To help overcome this objection the application forms and examination lists will have a footnote stating: “These examinations are Jointly Sponsored by the actuarial organizations listed above. Information as to the specific requirements for membership in a particular organization can be obtained from the office of that organization.” The Year Books of the organizations (as they are reprinted) will cover in detail exactly what their own current requirements are.

It is recognized that Joint Sponsorship means different things to different organizations and with respect to different examinations. For example, Joint Sponsors on Parts 1 and 2 for the Casualty Actuarial Society is very much a working partnership with the Society of Actuaries, whereas for the later Parts it is

more of an endorsement. However, it is clear that actuarial exams will change in the future and Joint Sponsorship gives a broad framework within which these changes can evolve.

The six actuarial organizations do not intend that Joint Sponsorship be “an empty gesture” and to that end each organization has appointed liaison delegates to the Advisory Committee on Education and Examinations of the Society of Actuaries, and to the Education and Examination Committee of the Casualty Actuarial Society.

Liaison delegates do not need to have membership status in the Casualty Actuarial Society or the Society of Actuaries. Joint Sponsorship must inevitably reflect the needs and desires of each participating organization, so it is imperative that each Joint Sponsor be given the opportunity to be represented by whomever it wished in the setting of policy for the Jointly Sponsored examinations. Only in this way can it be adequately informed as to the background of the policy and bring before the policymakers its own views and needs.

The question has been raised whether participation of the Joint Sponsors in the examination process should extend beyond the *policymaking* area into the area of *implementation* of this policy—in other words, whether it was necessary at this time for official representatives of the Joint Sponsors to become involved in the work of actually setting and grading the examinations. The current view is that although such participation might be attractive to some of the Joint Sponsors and might become increasingly appropriate over the long run, it was of varying importance to the various organizations and probably not essential initially to any, and might most properly be considered by the expanded policymaking “Advisory Committee.” This view takes into account the already existing participation of many members of the Joint Sponsors in the examination process, albeit as members of one of the administering organizations.

It should be again stressed that the development of Joint Sponsorship is evolutionary in nature. Indeed it is quite possible that Joint Sponsorship will have a different connotation if the current proposal for restructuring the Fellowship examinations of the Society is adopted by the six organizations. □

## Actuarial Meetings

April 9, Chicago Actuarial Club  
 April 12, Baltimore Actuaries Club  
 April 18, Seattle Actuarial Club  
 April 18, Actuaries Club of Des Moines  
 May 10, Baltimore Actuaries Club  
 May 16, Seattle Actuarial Club  
 May 16, St. Louis Actuaries Club  
 May 16, Nebraska Actuaries Club  
 May 21, Chicago Actuarial Club  
 June 14, Baltimore Actuaries Club  
 June 21 & 22, Actuaries Club of Southwest (Spring Meeting)

## Health Insurance Indices

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of the supplemental loss ratio, this Schedule H ratio does not greatly differ from that based on incurred premiums. In the “total” column of Schedule H and the exhibit, however, the increase in active life reserves is taken in the denominator rather than the numerator, resulting usually in an overstatement of the adequacy of premiums. The data in the table below set out the claim indices determined on the various bases and compare them to that index determined on the basis of the Analysis.

Basis	Claim Index
Schedule H	57.41%
Exhibit	52.29
Analysis	57.39
(Ratio of Schedule H index for Analysis index)	1.00
(Ratio of Exhibit index to Analysis index)	.91

In this day of consumerism the insurance industry cannot ignore statutory prescriptions which require it to exhibit indices which overstate its costs of acquiring and administering its health insurance policies and understate the percentage of the premium dollar returned to or set aside for policyholders in the form of benefits. It is not enough to say that premiums received or written would be a basis more appropriate than earned premiums for determining these indices.

*Editor's Note: Schedule H, and its ratio methods, are derived from casualty practice; perhaps some of our casualty actuarial readers might wish to comment on the author's analysis.* □